



ID	Model	Catchments Defined	Channel Routing	Obs Data Assembled	Model Built	Calibrated to Flow	Calibrated to TSS	May 2012	Jun 2012	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012	Dec 2012
21	LPS2	x		x		24	24								
22	Massey Crk			x											
23	McSorley			x											
24	Miller Walker	x	x	x											
25	Newaukum	x	x	x	x	x	x								
26	Olson Crk	x	x	x											
27	Salmon	x	o	x											
28	Big Soos	x	x	x	x	o	o								
Report															

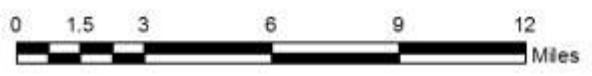
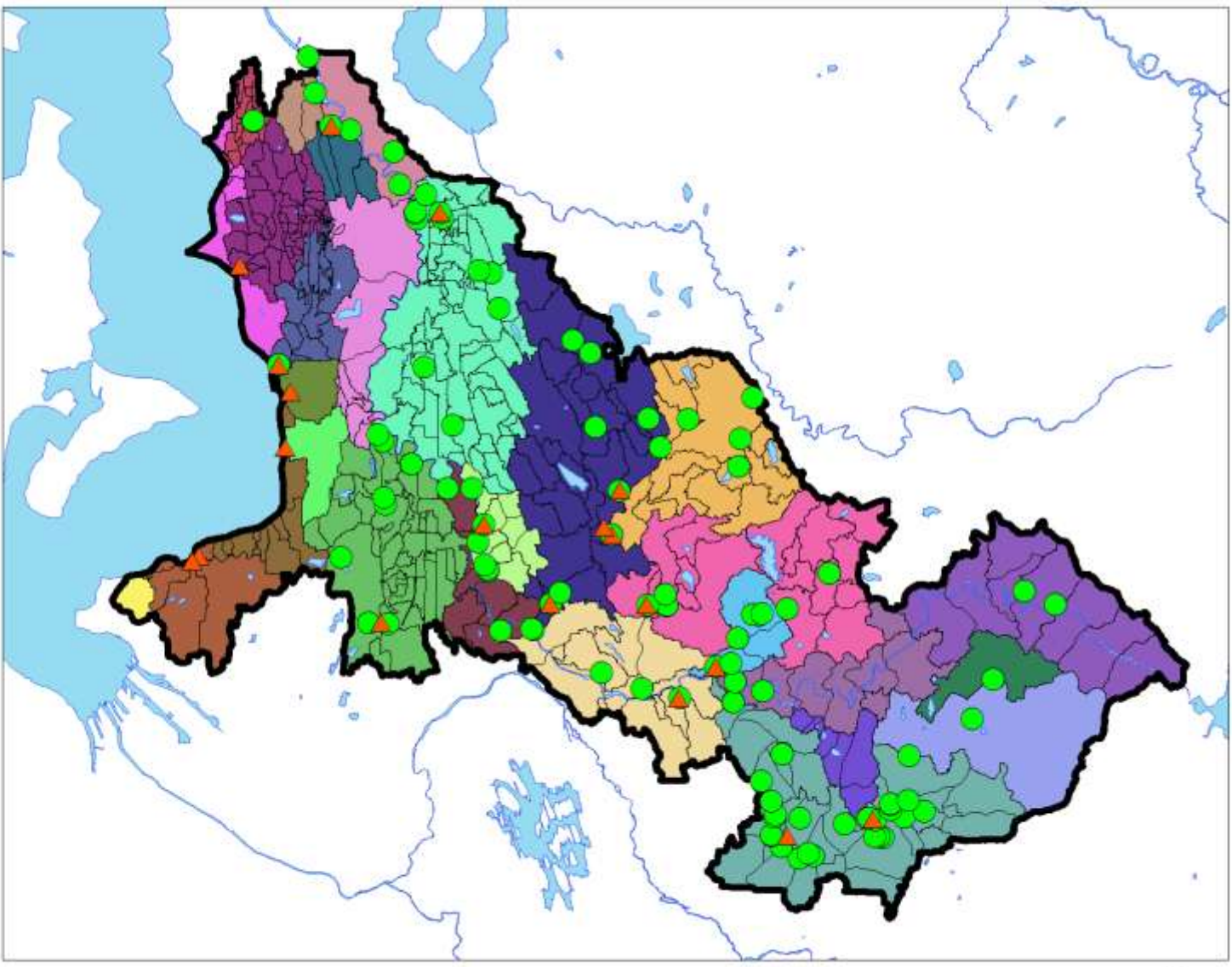
Notes: o = in progress or needs revisiting  
x = done  
# = ID of calibrated basin parameters will be taken from

In progress

Completed

**Legend**

- Legend**
- ▲ Flow Gauge
  - TSS Ctr
  - ▭ Study Area
  - ▭ Catchments
  - ▭ Core Area
  - Model Domains
    - ▭ (all other values)
  - Model
    - Black River
    - Boone Fork
    - Crissy Cr
    - Cox Cr
    - Coington
    - Crap Cr
    - Deep Cr
    - Duckholes
    - Dumas Bay
    - Duval Ld1
    - Duval Ld2
    - Green Ld1
    - Green Ld2
    - Green Ld3
    - Green Ld4
    - Green Ld5
    - Green Local
    - Hard Creek
    - Jankie
    - LP01
    - LP02
    - Lower Puget Sound
    - Messy Cr
    - McGowley
    - Miller\_Holker
    - Hercules Ln
    - Old Cr
    - Selmon
    - Yira



### Precipitation Data Inventory

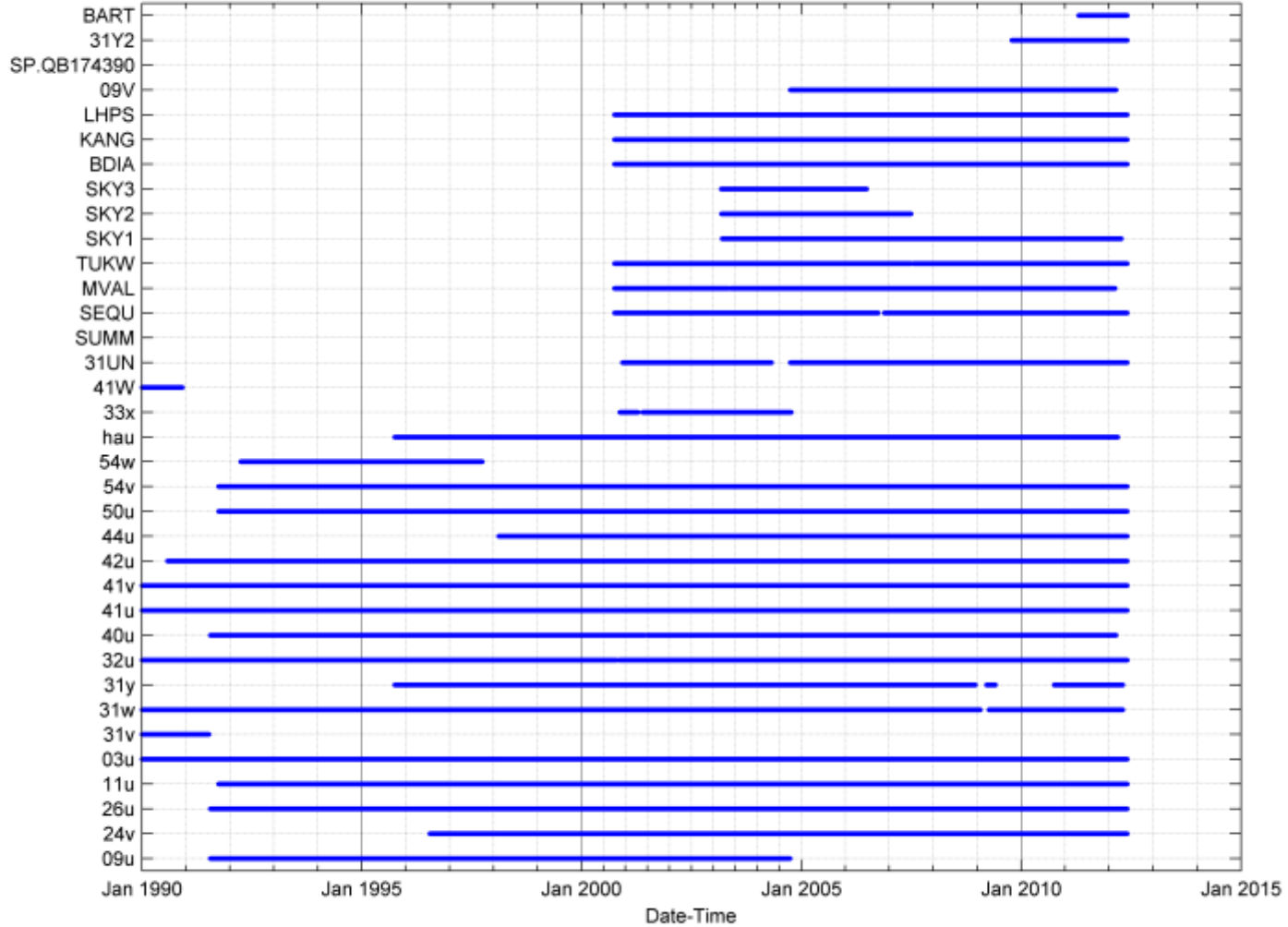


Figure 1 Assembled and processed precipitation data.

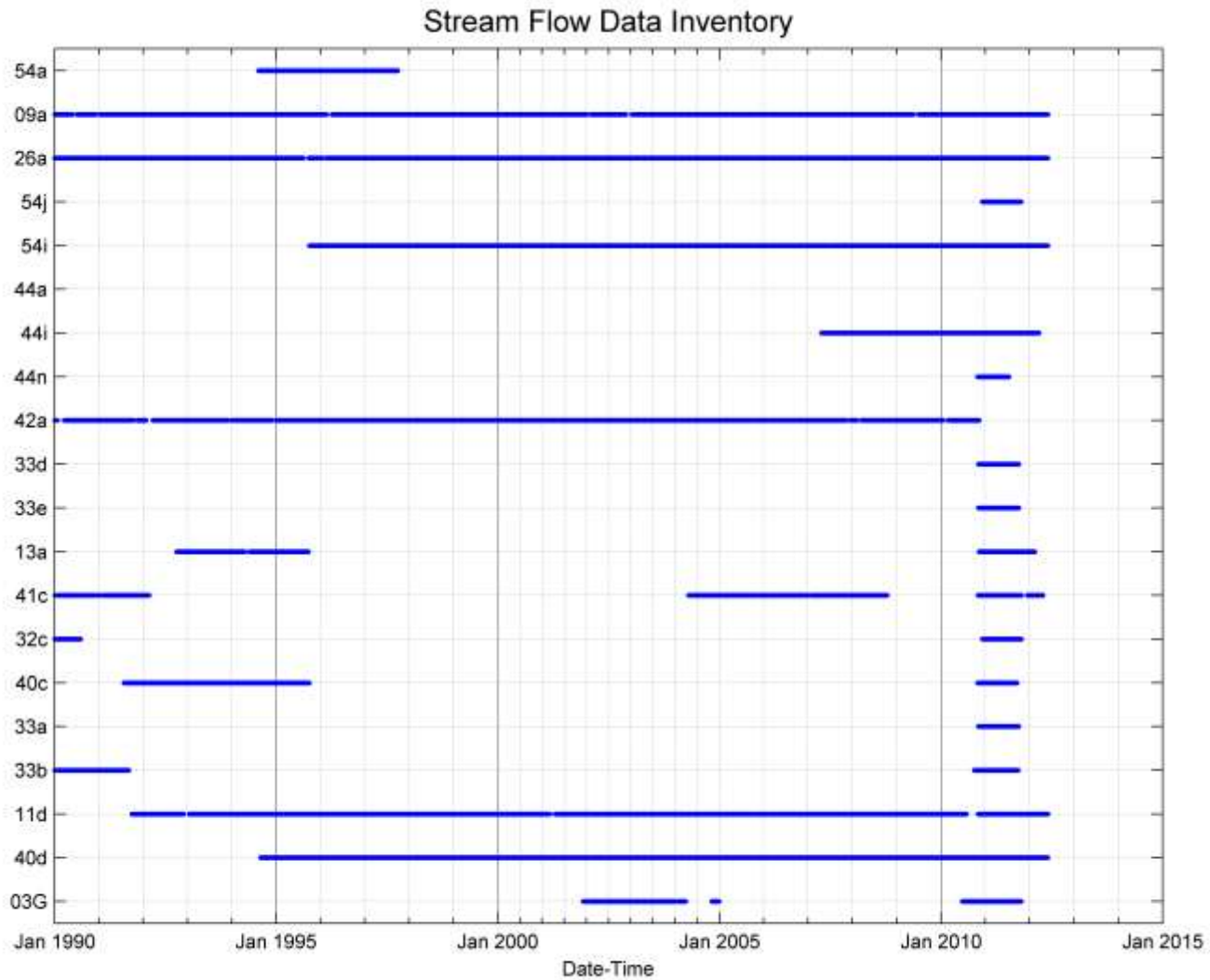


Figure 2 Assembled and processed stream flows data.

### TSS Data Inventory

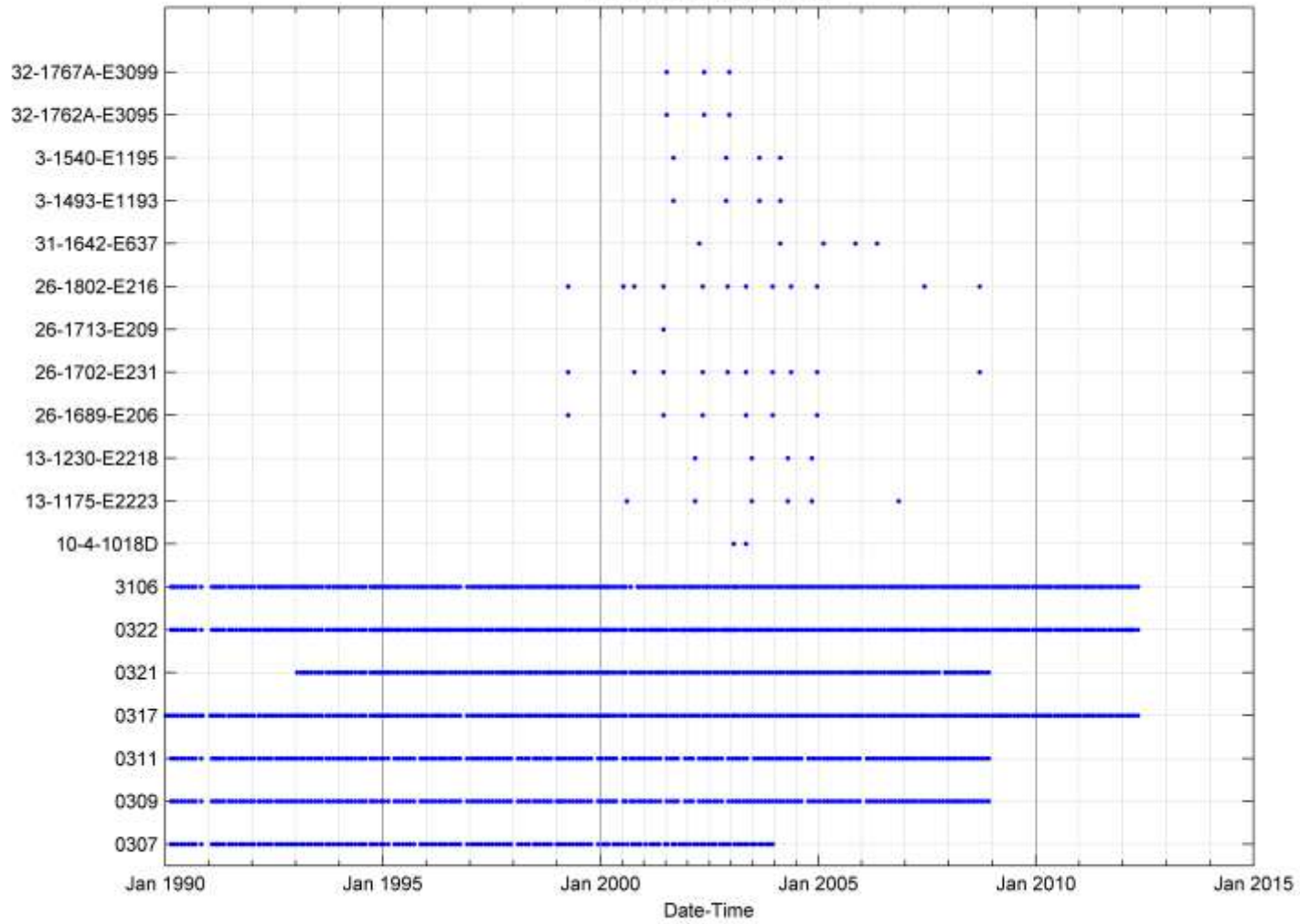


Figure 3 Assembled and processed TSS data.

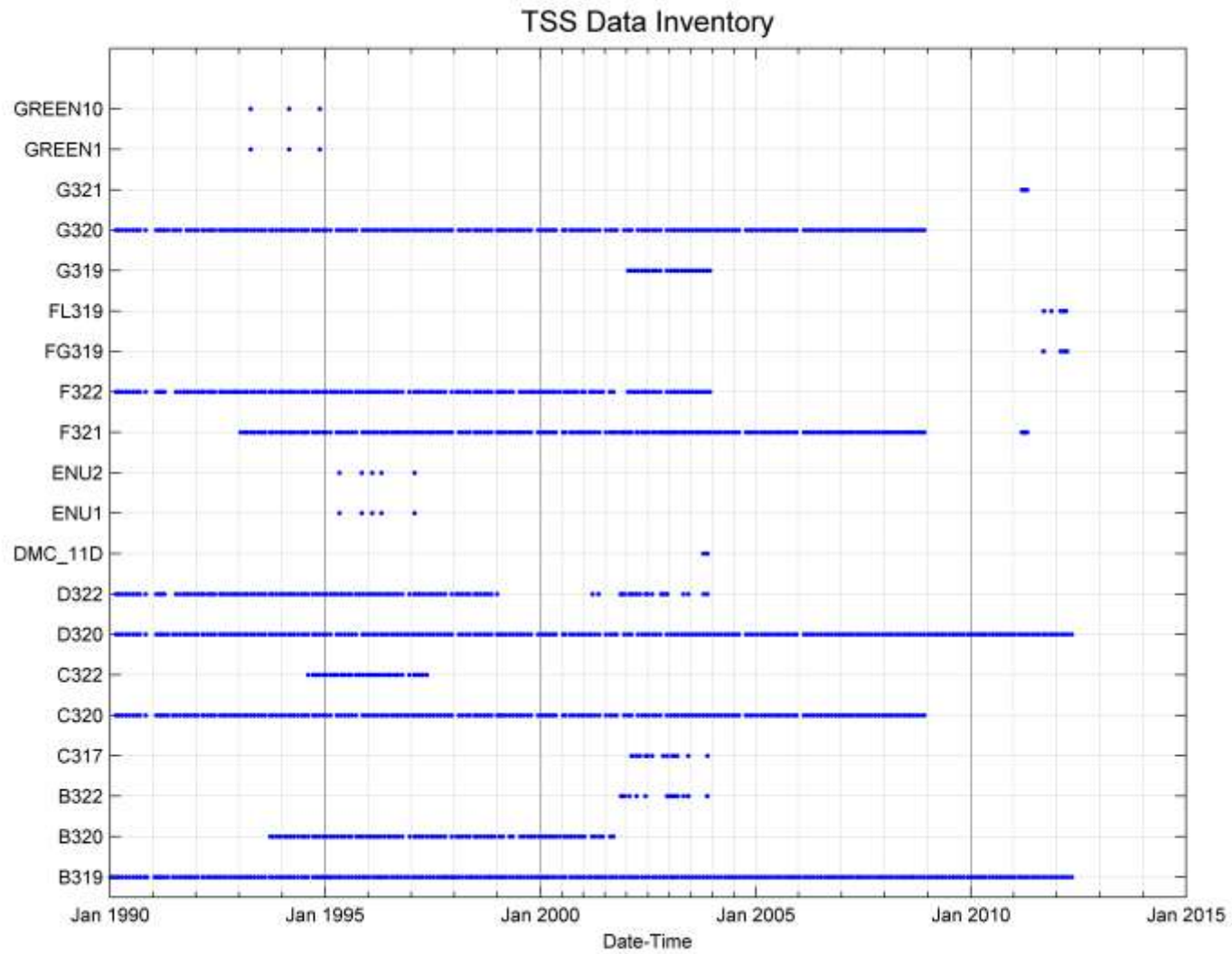
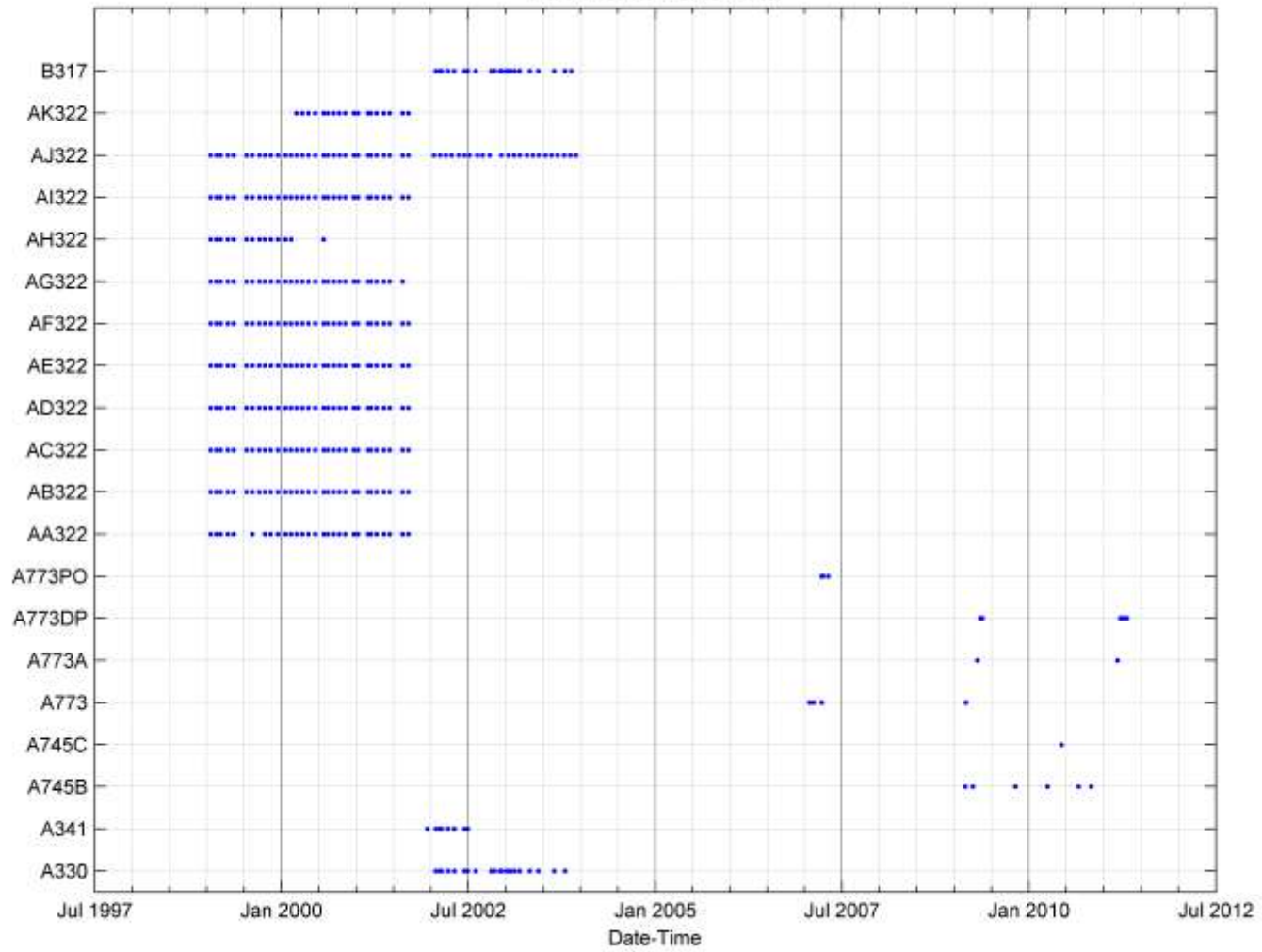


Figure 4 Assembled and processed TSS data.

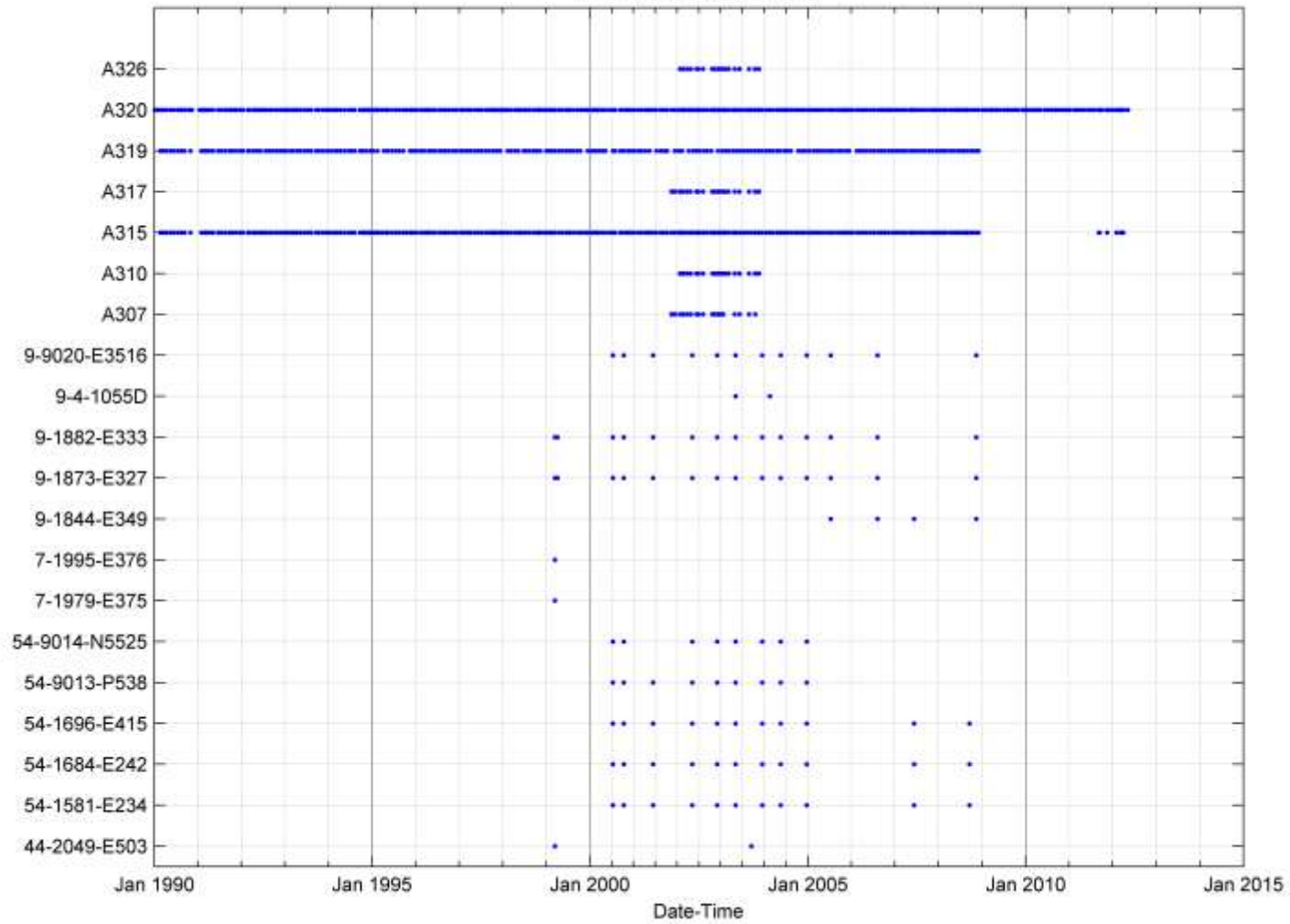


### TSS Data Inventory





# TSS Data Inventory



# Draft Outline for Watershed Modeling Report

## **Table of Contents**

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Abstract .....	<b>Error! Bookmark not defined.</b>
Executive Summary .....	<b>Error! Bookmark not defined.</b>
1. Introduction.....	<b>Error! Bookmark not defined.</b>
1.1 Study Area .....	<b>Error! Bookmark not defined.</b>
1.2 Goals and Objectives .....	<b>Error! Bookmark not defined.</b>
1.3 Model Selection .....	<b>Error! Bookmark not defined.</b>
2. Model Development (Methods).....	<b>Error! Bookmark not defined.</b>
2.1 Description of HSPF Model.....	<b>Error! Bookmark not defined.</b>
2.2 Data Used in Model Setup and Calibration .....	<b>Error! Bookmark not defined.</b>
2.2.1 Model Setup.....	<b>Error! Bookmark not defined.</b>
2.2.2 GIS Data.....	<b>Error! Bookmark not defined.</b>
2.2.3 Atmospheric Data .....	<b>Error! Bookmark not defined.</b>
2.2.4 Model Calibration and Testing .....	<b>Error! Bookmark not defined.</b>
2.3 Model Calibration Error Statistics .....	<b>Error! Bookmark not defined.</b>
2.3.1 Routine Statistics (Flow).....	<b>Error! Bookmark not defined.</b>
2.3.2 Routine Statistics (TSS).....	<b>Error! Bookmark not defined.</b>
2.3.3 Hydrologic Indicators .....	<b>Error! Bookmark not defined.</b>
2.3.4 Plots.....	<b>Error! Bookmark not defined.</b>
3. Model Calibration and Testing .....	<b>Error! Bookmark not defined.</b>
3.1 HRU Definitions .....	<b>Error! Bookmark not defined.</b>
3.1.1 Standardized.....	<b>Error! Bookmark not defined.</b>
3.1.2 Modified.....	<b>Error! Bookmark not defined.</b>
3.2 Newaukum Creek.....	<b>Error! Bookmark not defined.</b>
3.2.1 Flow .....	<b>Error! Bookmark not defined.</b>
3.2.2 TSS.....	<b>Error! Bookmark not defined.</b>
3.3 Big Soos, Jenkins, Covington Creeks.....	<b>Error! Bookmark not defined.</b>
3.3.1 Flow .....	<b>Error! Bookmark not defined.</b>
3.3.2 TSS.....	<b>Error! Bookmark not defined.</b>
3.4 Crisp Creek .....	<b>Error! Bookmark not defined.</b>

3.4.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.4.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.5	Christy Creek .....	<b>Error! Bookmark not defined.</b>
3.5.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.5.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.6	Black River .....	<b>Error! Bookmark not defined.</b>
3.6.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.6.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.7	Browns Point.....	<b>Error! Bookmark not defined.</b>
3.7.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.7.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.8	Coal Creek .....	<b>Error! Bookmark not defined.</b>
3.8.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.8.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.9	Deep Creek.....	<b>Error! Bookmark not defined.</b>
3.9.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.9.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.10	Des Moines Creek.....	<b>Error! Bookmark not defined.</b>
3.10.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.10.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.11	Dumas Bay.....	<b>Error! Bookmark not defined.</b>
3.11.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.11.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.12	Duwamish Local 1 .....	<b>Error! Bookmark not defined.</b>
3.12.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.12.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.13	Duwamish Local 2 .....	<b>Error! Bookmark not defined.</b>
3.13.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.13.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.14	Green Local 1.....	<b>Error! Bookmark not defined.</b>
3.14.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.14.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.15	Green Local 2.....	<b>Error! Bookmark not defined.</b>

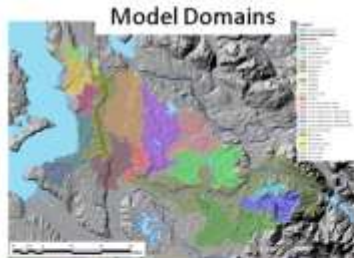
3.15.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.15.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.16	Green Local 3.....	<b>Error! Bookmark not defined.</b>
3.16.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.16.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.17	Green Local 4.....	<b>Error! Bookmark not defined.</b>
3.17.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.17.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.18	Green Local 5.....	<b>Error! Bookmark not defined.</b>
3.18.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.18.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.19	Mill/Mullen Creek .....	<b>Error! Bookmark not defined.</b>
3.19.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.19.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.20	Ham Creek .....	<b>Error! Bookmark not defined.</b>
3.20.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.20.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.21	Lower Puget Sound 1 .....	<b>Error! Bookmark not defined.</b>
3.21.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.21.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.22	Lower Puget Sound 2.....	<b>Error! Bookmark not defined.</b>
3.22.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.22.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.23	Massey Creek.....	<b>Error! Bookmark not defined.</b>
3.23.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.23.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.24	McSorley Creek .....	<b>Error! Bookmark not defined.</b>
3.24.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.24.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.25	Miller/Walker Creek .....	<b>Error! Bookmark not defined.</b>
3.25.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.25.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.26	Olson Creek .....	<b>Error! Bookmark not defined.</b>

3.26.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.26.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.27	Salmon Creek.....	<b>Error! Bookmark not defined.</b>
3.27.1	Flow .....	<b>Error! Bookmark not defined.</b>
3.27.2	TSS.....	<b>Error! Bookmark not defined.</b>
3.28	Model Testing to Turbidity.....	<b>Error! Bookmark not defined.</b>
3.29	Model Testing to Uncalibrated Drainages .....	<b>Error! Bookmark not defined.</b>
3.29.1	Browns Point.....	<b>Error! Bookmark not defined.</b>
3.29.2	Coal Creek .....	<b>Error! Bookmark not defined.</b>
3.29.3	Deep Creek.....	<b>Error! Bookmark not defined.</b>
3.29.4	Duwamish Local 2 .....	<b>Error! Bookmark not defined.</b>
3.29.5	Green Local 1.....	<b>Error! Bookmark not defined.</b>
3.29.6	Green Local 2.....	<b>Error! Bookmark not defined.</b>
3.29.7	Green Local 3.....	<b>Error! Bookmark not defined.</b>
3.29.8	Green Local 4.....	<b>Error! Bookmark not defined.</b>
3.29.9	Green Local 5.....	<b>Error! Bookmark not defined.</b>
3.29.10	Lower Puget Sound 1.....	<b>Error! Bookmark not defined.</b>
3.29.11	Lower Puget Sound 2.....	<b>Error! Bookmark not defined.</b>
3.30	Long-term Historical Sea-Tac to Local .....	<b>Error! Bookmark not defined.</b>
3.31	Global Climate Model Scenarios .....	<b>Error! Bookmark not defined.</b>
4.	Conclusions and Recommendations .....	<b>Error! Bookmark not defined.</b>
5.	References.....	<b>Error! Bookmark not defined.</b>

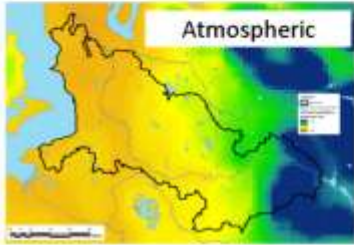
Statistics to be used:

- Pearson Coefficient
- Mean Error
- Root Mean Square Error
- R-Square
- Mean Absolute Error
- Nash-Sutcliffe
- Skill Score
- Volumetric Quantiles ( Durations)
- Mann-Whitney *U*-test

# HSPF Watershed Modeling



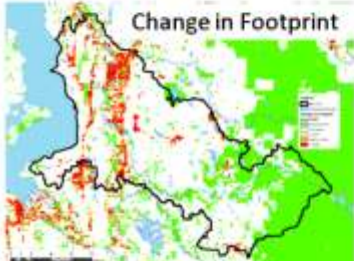
Study area includes WRIA 9 below Howard Hanson Dam excluding Vashon Island and City of Seattle, number of models based on scale and geographic locations and conditions.



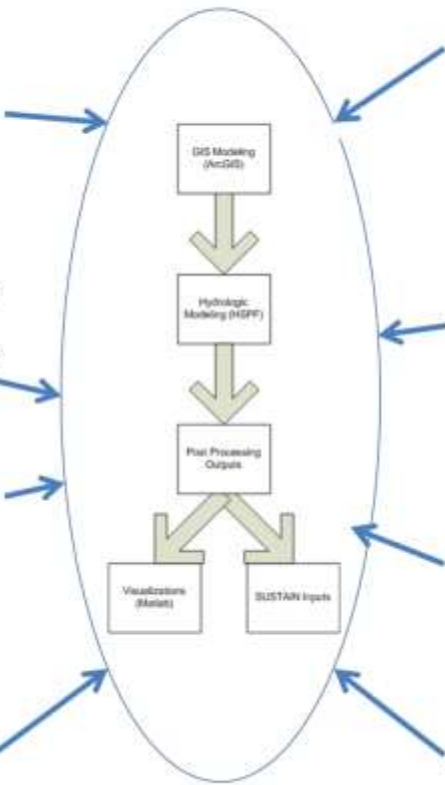
Atmospheric scenarios include: historically observed (SeaTac) and ensemble of 20 model runs using 2 emission scenarios and 10 different downscaled climate models



Change in UrbanSim simulated residential units between 2007 and 2040 used to define types of development:  
 New Development: 0 → DU  
 Redevelopment: DU ≠ DU  
 Retrofit: DU = DU



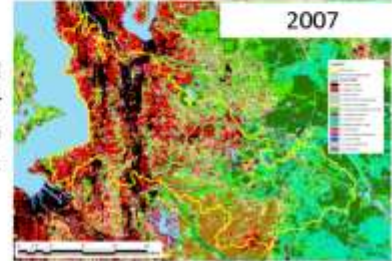
Change in UrbanSim simulated building square feet used to help define amount of impervious surface routed to LIDs and other BMPs



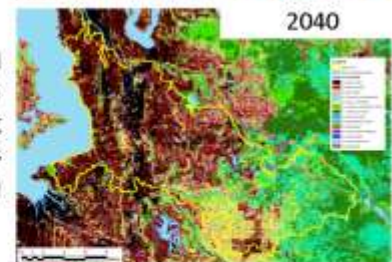
Total forest cover with known existing wetlands used to characterize pre-development conditions representing idealized state of the watersheds



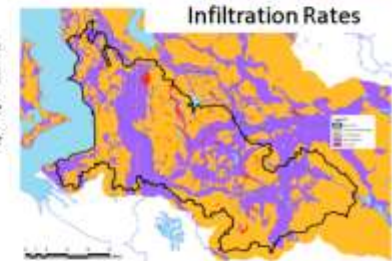
2007 satellite imagery classified into 14 land use land cover categories (Alberti) used to represent current conditions.



Land Cover Change Model (LCCM) projecting conditions in the year 2040 using existing land use regulations-- Business As Usual (BAU)



Soil infiltration rates are used to help define types of LIDs and BMPs that might be more effective



## Modeling Outputs & Analyses

